



# UNITED STATES PATENT AND TRADEMARK OFFICE

cel

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,042	07/25/2001	Charles Robert Giardina	2-10-6	7043

7590 05/17/2005

Docket Administrator (Room 3C-512)  
Lucent Technologies Inc.  
600 Mountain Avenue  
P.O. Box 636  
Murray Hill, NJ 07974-0636

EXAMINER

AGHDAM, FRESHTEH N

ART UNIT PAPER NUMBER

2631

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/915,042	GIARDINA ET AL.	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 25 July 2001.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 7/25/2001 have been fully considered but they are not persuasive. The following is the examiner's response to applicant's argument:

**Applicant's argument:** In page 7, applicant argues "the claimed invention is not taught, suggested, or implied by Wright et al. " (Lines 20-24); and "Thus, claim 1 has been amended to recite "using said current input sample to produce a first sample output value dependent on said current input sample and independent of said time spaced input sample; and using said time spaced input sample to produce a second sample output value dependent on said time spaced input sample and independent of said current input sample" (Lines 15-19).

**Examiner's response:** Applicant's claim 1 recites "using said current input sample to produce a first sample output value dependent on said current input sample and independent of said time spaced input sample; and using said time spaced input sample to produce a second sample output value dependent on said time spaced input sample and independent of said current input sample". Kaufmann teaches this limitation in (Fig. 1b; Col. 2, Lines 40-54; Col. 15; Col. 5, Lines 10-36) wherein each computed tap coefficient is responsive to the corresponding scaled amplitude value of the input symbol as shown in figure 1b.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 5 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 5 and 10, the cited formula is unclear and indefinite since the parameter  $C_k$  is undefined.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaufmann (US 5,778,029).

As to claims 1 and 6, Kaufmann teaches a predistortion system comprising providing a current input sample (Fig. 1b; X1) and at least a one time spaced input sample (X0); using the current input sample to produce a first sample output value dependent on the current input sample value and independent of the time spaced input

Art Unit: 2631

sample ( $X1 \cdot C-1$ ); using the time spaced input sample to produce a second sample output value dependent on the time spaced input sample and independent of the current input sample ( $X0 \cdot C0$ ) and combining (Fig. 1b; means 13) at least the first and second sample output values to produce a predistorted signal (WAVEFORM OUT) see (Fig. 1b; Col. 2, Lines 40-54; Col. 15; Col. 5, Lines 10-36).

As to claims 2 and 7, Kaufmann discloses that time spaced input signal samples are successive input symbols see (Fig. 1b;  $X1$ ,  $X0$ ,  $X-1$ ).

As to claims 3, 4, 8, and 9, Kaufmann teaches producing a sample output value ( $X1 \cdot C-1$ ) corresponding to the scaled amplitude value of the current sample input value (Fig. 1b;  $X1$ ) and applying it as a pointer to a look-up table (12a) to produce an intermediate value and then multiplying it with the current input sample to produce the first sample output value ( $X1 \cdot C-1$ ); using the second amplitude value as a pointer to the look up table (12b) to produce the second intermediate value; and multiplying the intermediate value and the time spaced input sample to produce the second sample output value ( $X0 \cdot C0$ ), and combining the computed output values at (summation means 13) see (Fig. 1b; Col. 2, Lines 40-54; Col. 15; Col. 5, Lines 10-36).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2631

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/915,042  
Art Unit: 2631

Page 6

Freshteh Aghdam

May 15, 2005



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINE**  
**TECHNOLOGY CENTER 2000**